

**CLEAN VERSION OF EACH REPLACEMENT PARAGRAPH/SECTION/CLAIM AND**  
**INSTRUCTIONS FOR ENTRY**

**IN THE SPECIFICATION:**

As a result of these procedures, the disease specific markers namely peroxisomal carnitine octanoyl transferase protein having a molecular weight of about 1208.6574 daltons and a sequence of SEQ ID NO: 1, betain/GABA transport protein having a molecular weight of about 1211.5591 daltons and a sequence of SEQ ID NO: 2, and adrenergic, alpha-2A, receptor having a molecular weight of about 1446.7831 daltons having a sequence of SEQ ID NO: 3 related to Insulin Resistance were found.

**IN THE CLAIMS:**

1. A biopolymer marker selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 or at least one analyte thereof useful in indicating at least one particular disease state.

2. The biopolymer marker of claim 1 wherein said disease state is predictive if insulin resistance.

18. A kit for diagnosing, determining risk-assessment, and identifying therapeutic avenues related to a disease state comprising:

at least one biochemical material which is capable of specifically binding with a biomolecule which includes at least one biopolymer marker selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 or analyte thereof related to said disease state; and

means for determining binding between said biochemical material and said biomolecule;  
whereby at least one analysis to determine a presence of a marker, analyte thereof, or a

biochemical material specific thereto, is carried out on a sample.

29. Polyclonal antibodies produced against a marker sequence ID selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 or at least one analyte thereof in at least one animal host.

30. An antibody that specifically binds a biopolymer including a marker selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 or at least one analyte thereof.

33. A process for identifying therapeutic avenues related to a disease state comprising:  
conducting an analysis as provided by the kit of claim 18; and  
interacting with a biopolymer selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 or at least one analyte thereof;  
whereby therapeutic avenues are developed.

34. The process for identifying therapeutic avenues related to a disease state in accordance with claim 33, wherein said therapeutic avenues regulate the presence or absence of the biopolymer selected from the group consisting of SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3 or at least one